

Amendments to the Specification

On page 11, amend the final paragraph (which extends to page 12) to read:

The negative input terminal of comparator amplifier 116 is coupled to feedback loop 92 between resistors 96 and 98, to receive a comparator input voltage ~~through a resistor 117~~. The comparator input voltage varies in response to the incoming current in a manner consistent with the variance of the integrator output. More particularly, the integrator output and the voltage applied to the negative input of amplifier 116 respond to incoming current by changing in a selected first direction (i.e., both are reduced). Further, these voltages are changed at a rate that increases in proportion to the level of the incoming current. For convenience, the voltage input to amplifier 116 can be thought of as a condition-monitoring voltage V_3 , because it reflects a condition of the integrating component of circuit 84, namely a voltage along feedback loop 92. One difference between these signals is that changes in the condition-monitoring voltage lag changes in the integrator output, by a time delay determined by the time constant of an RC network provided by a resistor 120 and capacitor 122 between amplifier 116 and feedback loop 92.

On page 12, amend the second full paragraph to read:

Comparator 112 includes an amplifier 126 that receives power at voltage level V_1 , and has a resistor 128 along its feedback loop. The negative input terminal of amplifier 126 receives the condition monitoring voltage ~~through a resistor 129~~, while the positive input terminal is biased to a constant upper threshold voltage V_6 that determines an upper end of the operating range. Comparator amplifier 126 is configured to generate, alternatively, two outputs at its output terminal 130: the high voltage level V_4 when the condition monitoring voltage is less than threshold voltage V_6 , and the low voltage level V_5 when the condition monitoring voltage is above threshold voltage V_6 . Resistors 128 and 129 function in the same manner as resistors 117 and 118, to stabilize transitions in the output of amplifier 126 between the high and low voltage levels.

On page 15, amend the first full paragraph to read:

When voltage V_3 drops below the upper threshold voltage level $V_T V_6$ (at 158), amplifier 126 switches its output back to the high voltage level. The high voltage level terminates a discharge, thus to initiate the next normal integration cycle with voltage V_3 just below upper threshold voltage level $V_T V_6$.